

Application No. 10/525,299
AMENDMENT AND RESPONSE dated June 20, 2007
Reply to Office Action of January 26, 2007

REMARKS/ARGUMENTS

Introduction

Claims 1, 3-20 and 22-38 are pending. There are only two independent claims, claim 1 and claim 20.

The Rejection

Based upon section 112 of the Patent Code, the Examiner only objected to claims 13, 15, 16, 17 (should have been 18), 32 and 34, 35, 36(should have been 37), 37 and 38 without any art rejections of those claims. The Examiner also objected to claim 23, but also rejected this claim with his art/obviousness rejection.

The only art rejection is an obviousness rejection of claims 1, 3-12, 20 and 22-31 based upon Esselborn in view of Inaoka. As will be set forth below, applicants respectfully submit Inaoka is not a reference and Esselborn does not render the claims obvious.

The Amendment Has Obviated All Of The Objections Based Upon Section 112

With this amendment the only two independent claims (1 and 20) have been amended to obviate the Examiner's section 112 rejections (solids and Z definition). Other dependent claims 14, 19, 33 and 38 have been amended to solve section 112 rejections concerning the phrase "such as." Applicants also have amended claims 18 and 37 to make them consistent with claims 1 and 20 and the Markush groups in the independent claims. In this objection Applicants suggest that the Examiner incorrectly referred to claim 17 when he meant claim 18. Claims 4 and 23 also was amended to remove the phrase ATRP and parentheses.

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Patent Publication US 2005/0080298 to Inoaka et al. Is Not A Reference.

Inaoka was published April 14, 2005 and was filed as a PCT application apparently in English in Japan on May 3, 2003. Applicants claim a foreign 119 priority to August 14, 2002 in this application. A certified copy of Applicants' priority document is already on file and their foreign priority claim has been acknowledged. See paragraph 12 of the last office action.

At best Inaoka's §102(e) date is his PCT filing date of May 3, 2003. Applicants' foreign priority date of August 14, 2002 trumps and is earlier than Inaoka's 102(e) date. According to section 2136.03 of the MPEP:

I. FOREIGN PRIORITY DATE

Reference's Foreign Priority Date Under 35 U.S.C. 119(a)-(d) and (f) Cannot Be Used as the 35 U.S.C.102(e) Reference Date.

35 U.S.C. 102(e) is explicitly limited to certain references 'filed in the United States before the invention thereof by the applicant' (emphasis added). Foreign applications' filing dates that are claimed (via 35 U.S.C.119(a)-(d), (f) or 365(a)) in applications, which have been published as U.S. or WIPO application publications or patented in the U.S. may not be used as 35 U.S.C. 102(e) dates for prior art purposes. This includes international filing dates claimed as foreign priority dates under 35 U.S.C. 365(a). Therefore, the foreign priority date of the reference under 35 U.S.C.119(a)-(d), (f) and 365(a) cannot be used to antedate the application filing date. In contrast, applicant may be able to overcome the 35 U.S.C. 102(e) date by proving he or she is entitled to his or her own 35 U.S.C. 119 priority date which is earlier than the reference's U.S. filing date. *In re Hilmer*, 359 F.2d 859, 149 U.S.P.Q. 480 (CCPA 1966)...

Applicants respectfully request that the rejection utilizing Inaoka be withdrawn.

Esselborn Does Not Render The Claims Obvious, But Rather Describes A Completely Different Reaction From The Reaction Described In The Claims

Applicants submit that the claims herein describe a method which is not only chemically different in its mechanism, but also provides a different product. The claims herein describe a method of dispersing aqueous suspensions of solids by using a dispersant

comprising block copolymers which are a reaction product of a free radical, anionic or cationic polymerization of a poly (alkylene oxide) of formula I with an ethylene compound of formula II. See page 11 first paragraph of the specification which describes these reactions. The reaction product/block copolymers form the dispersant. Esselborn does not describe such a reaction, and certainly does not describe such a reaction to obtain a dispersant. As acknowledged by the Examiner, Esselborn describes a dispersant, but does not describe a dispersant with a cement. That is why the Examiner cited Inaoka et al., but as discussed above Inaoka et al. is not available as a reference. As will be discussed below, no matter if Inaoka et al. is available as a reference, the claims are not obvious in view of Esselborn or a combination of Esselborn and Inaoka.

Esselborn describes a first reaction of a t-butyl methacrylate with an ester or carboxyl function mercaptan to give a *first reactant which is a poly t-butyl methacrylate segment*. See column 2, lines 8-45. Thereafter, the latter poly methacrylate segment is reacted with a polyalkylene oxide segment *in the presence of an esterification or transesterification catalyst* (see columns 4 to 5) which then is followed by the elimination of isobutene. Esselborn forms an intermediate with a free radical reaction then further reacts the methacrylate segment in a condensation reaction. Esselborn introduces a polyalkylene oxide via the transesterification/condensation reaction. See column 2, lines 16 to 23. That condensation reaction takes place at a -C(O)-O- group of the poly methacrylate segment. In contrast applicants form their dispersant with a free radical, anionic or cationic reaction.

The reaction mechanisms of Esselborn and its differences from the mechanisms of claims are not academic. The only way to get a sulfur into the dispersant of the claims would be when z is formula V and z is -SH or z is formula IV with double bonded oxygens on the sulfur. In any event, if for example z is -SH, the reaction described in the claims would provide $R^1-O-(C_mH_{2m}O)_{n-1}-C_mH_{2m}-S-(C(R^6,R^7)-C(R^8,R^9))_w-H$. Because of the nature of his reaction, when Esselborn has sulfur that sulfur will be in the same line of carbons which has a carbonyl

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group, for example H-(CC(O)OX(CH₃)-CH₂)_m-S-(CH₂)_pC(O)-O-(C_nH_{2n})_oR¹ (See formula I at column 2, line 30 of Esselborn).

Esselborn needs an ester group to prepare his copolymers via his condensation esterification/transesterification reaction. This type of reaction creates its own problems which are not problems with applicants' free radical, anionic or cationic reaction to obtain block copolymers. Esselborn's problems include hydrolysis, transesterification, pH dependent stability. These problems do not exist for applicants because ester groups are not used in the polymerization reaction and ester groups are absent in the polymer backbone.

Conclusion

Applicants respectfully submit that the current claims patentably define the invention and requests that a timely Notice of Allowance be issued in this case. The Commissioner is hereby authorized to charge any additional fees which may be required in the Application to Deposit Account No. 06-1135.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

By:


Timothy E. Levstik
Registration No.: 30,192

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FITCH, EVEN, TABIN & FLANNERY
120 South LaSalle Street Suite 1600
Chicago, Illinois 60603-3406
Telephone: (312) 577-7000
Facsimile: (312) 577-7007